

1.1 Inequalities

Reading math

$$\Rightarrow x < 3 \quad x \leq 2$$

 $x$  is less than 3 $x$  is less than or equal to 2

"And" statements:

$$\Rightarrow -2 \leq x < 5$$

 $x$  is greater than or equal to -2

AND

 $x$  is less than 5From your text book define:

$$\Rightarrow \text{Integers: } \{ \dots, -2, -1, 0, 1, 2, \dots \}$$

$$\Rightarrow \text{Real Numbers: } \text{The set of all decimals- negative, positive, terminating and non terminating and zero}$$

Sep 3-3:05 PM

Reading math:

$$\{ x / -2 < x \leq 7, x \in \mathbb{R} \}$$

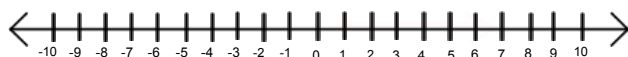
The set of all  $x$  such that $x$  is greater than negative two and less than or equal to 7and  $x$  is an element of the Reals

Sep 7-12:52 PM

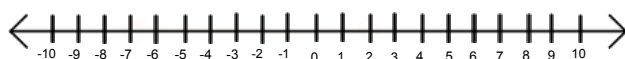
Inequalities can be expressed graphically ( # line)  
or with set notation

Graph

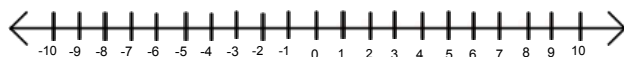
Set Notation



$$\{x / x \geq 1, x \in \mathbb{R}\}$$



$$\{x / x < 2, x \in \mathbb{R}\}$$



$$\{x / x > 1, x \in \mathbb{I}\}$$

Feb 2-1:45 PM

And Statements:

$$\{x / -2 \leq x < 1, x \in \mathbb{R}\}$$



$$\{x / -3 \leq x \leq 1, x \in \mathbb{I}\}$$



small list of #'s so could be written  $\{-3, -2, -1, 0, 1\}$

Or Statements

$$\{x / x \leq -3 \text{ or } x > 2, x \in \mathbb{R}\}$$



Sep 3-3:23 PM

## Biggest Mistakes

WRONG

$$< x >$$

Both big sides facing x

WRONG

$$> x <$$

Both small sides facing x

Should write as :

smallest #  $< x <$  largest #

When you only have one value, x should be on the left

i.e.  $x > 8$

or

$$x < -5$$

Sep 7-12:52 PM

HMWK

Finish last days Homework Handouts

Inequalities Handouts:

What Happened...

3M- More Practice



Sep 4-7:52 AM